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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/625,506	07/24/2003	Katsuaki Minami	GOT 174	9005
23995	7590	02/24/2005	EXAMINER	
RABIN & Berdo, PC 1101 14TH STREET, NW SUITE 500 WASHINGTON, DC 20005			LOUIS JACQUES, JACQUES H	
			ART UNIT	PAPER NUMBER
			3661	

DATE MAILED: 02/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/625,506

Applicant(s)

MINAMI ET AL.

Examiner

Jacques H Louis-Jacques

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 November 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 9-15 is/are allowed.
- 6) ☒ Claim(s) 1-8 and 16-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-6 and 16-18, 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Strifler [4,494,404].

Strifler discloses a fuel consumption monitoring system for motor vehicle with manual-shifted transmissions. According to Strifler, an amount of fuel consumed prior to an operation of the vehicle (i.e., gearshifting) is determined, then such amount of fuel consumed is compared to the amount of fuel consumed after the operation of the vehicle is performed in order to obtain an excess of fuel consumed, which is then displayed to the driver of the vehicle. See abstract. See also column 12. According further to Strifler, as described in column 1, lines 6-21, the monitoring system emits an indicating signal informing the driver of the fuel utilization to be expected if another gear were selected. See also column 4, lines 18-68. See also columns 5 and 6. The monitoring system of Strifler provides the driver with a decision-aid to enable him to optimize his choice of gear ratio with regard to minimizing the fuel consumption. Strifler discloses generating a warning to a driver when it is detected that the operation that worsens fuel economy has been performed (columns 4 and 12-13). Furthermore, Strifler discloses a recording device (e.g., a memory) for recording excess fuel consumption, when the excess fuel

consumption is displayed to the driver on the display device based on the causes (gear ratio or gearshift, vehicle speed, etc. See column 14-16. According still to Strifler, the operation that worsens the fuel economy can be an acceleration of the vehicle, i.e., when the vehicle accelerates by a greater acceleration than a predetermined rapid acceleration determination value. Strifler also discloses that processing operating (processor) determines that an upshift is possible when an engine rotation speed following an upshift is higher than a specified rotation speed (column 1), and a drive force at full load following an upshift is greater than a current running resistance (column 2). That is, Strifler discloses the condition when the vehicle is climbing a hill. The operation, according to Strifler can also be a deceleration of the vehicle, i.e., when the vehicle decelerates by a greater deceleration than a predetermined rapid deceleration determination value. Still, according to Strifler, the operation can be the vehicle speed, i.e., when the vehicle runs at a higher vehicle speed than a specified vehicle speed. See columns 1 and 2. Furthermore, according to Strifler, the system determines whether an upshift is possible (i.e., selecting a higher gear) and determines that the operation that worsens fuel economy has been performed when the vehicle runs without an upshift under conditions in which upshift is possible. See columns 1 and 2. See also columns 3 and 4. According further to Strifler, the monitoring system comprises a display device or displaying the calculated excess (difference) fuel consumption. See column 9.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Strifler [4,494,404] in view of Ehlbeck et al [6,092,021].

Strifler does not particularly disclose that the operation that worsens fuel economy has been performed when the vehicle racing. Ehlbeck et al, on the other hand, discloses a fuel use efficiency system for a vehicle for assisting the driver to improve fuel economy, wherein an operation that worsens fuel economy is performed when the vehicle is racing, i.e., dragging. The system, according to Ehlbeck et al, indicates to the driver when inefficient fuel use is detected. For example, it displays a measure of excess fuel consumed and messages indicating actions that can be taken to improve fuel economy in response to detecting inefficient fuel use. Thus, it would have been obvious to one skilled in the art at the time of the invention to be motivated to modify the fuel consumption monitoring system for motor vehicle of Strifler by incorporating the racing operation from the fuel system of Ehlbeck et al because such modification, as suggested to Ehlbeck et al, would provide a fuel system that would dynamically detect inefficient driving actions and indicating information about excess fuel consumption to the driver.

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5. Claims 8, 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Strifler [4,494,404] in view of Horgan et al [5,954,617].

Strifler does not particularly disclose ranking the driving skill of a driver based on the frequency (i.e., amount of time or occurrence) with which operations that worsen fuel economy are performed and display such driving skill rank. Horgan et al, on the other hand, discloses a system for controlling internal combustion engine performance in accordance with driver behavior, whereby driver rank or performed is determined based on the frequency with which operations that worsen fuel economy are performed. See columns 2 and 3. See also columns 15 and 16. Furthermore, as described in column 3, the frequency with which operations that worsen fuel economy are performed is displayed on a display device and recorded on a recording device. Thus, it would have been obvious to one skilled in the art at the time of the invention to be motivated to modify the fuel consumption monitoring system of Strifler by incorporating the ranking of the driver performance from the performance control system of Horgan et al because such modification, as suggested by Horgan et al, would provide a system that would encourage drivers to operate their vehicles in accordance with predefined vehicle operational goals, thereby improving the overall fuel economy of the vehicle.

Allowable Subject Matter

6. Claims 9-15 are allowed over the prior art.

Response to Amendments & Arguments

7. The amendments along with the arguments filed therewith have been entered and carefully considered by the examiner.

The terminal disclaimer filed on November 23, 2004 has been entered and approved.

Accordingly, the obviousness-type double patenting rejection has been withdrawn.

Claims 6, 9-15 were objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all the limitations of the base claim and any intervening claims. In light of the amendments, claims 9, 10, 11 (12-15) have been rewritten into independent form. Accordingly, these claims are allowed over the prior art of record.

Regarding the prior art rejection, Applicant argued that the applied prior art does not teach "calculate an actual amount of consumed fuel and an amount of field which would have been consumed had the operation which worsens fuel economy not been performed." Applicant contended that the prior art references only estimated the amount of fuel being consumed.

It is noted that this amount of fuel being consumed as recited in the claims of the present application is merely an amount of fuel consumed prior to the operation of the vehicle is performed. In other words, an amount fuel consumed is determined prior the vehicle operation (cruise, acceleration, etc.) is performed, which is then compared to the amount fuel consumed during the operation of the condition of the vehicle.

Notwithstanding Applicant's arguments, however, a new ground of rejection, which more positively describes the claimed limitation, is being applied against the claims of the present application.

Specifically, Strifler discloses a fuel consumption monitoring system for motor vehicle with manual-shifted transmissions. According to Strifler, an amount of fuel consumed prior to an operation of the vehicle (i.e., gearshifting) is determined, then such amount of fuel consumed is compared to the amount of fuel consumed after the operation of the vehicle is performed in order to obtain an excess of fuel consumed, which is then displayed to the driver of the vehicle. See abstract. See also column 12. According further to Strifler, as described in column 1, lines 6-21, the monitoring system emits an indicating signal informing the driver of the fuel utilization to be expected if another gear were selected. See also column 4, lines 18-68. See also columns 5 and 6. The monitoring system of Strifler provides the driver with a decision-aid to enable him to optimize his choice of gear ratio with regard to minimizing the fuel consumption. According still to Strifler, the operation that worsens the fuel economy can be an acceleration of the vehicle, i.e., when the vehicle accelerates by a greater acceleration than a predetermined rapid acceleration determination value. The operation, according to Strifler can also be a deceleration of the vehicle, i.e., when the vehicle decelerates by a greater deceleration than a predetermined rapid deceleration determination value. Still, according to Strifler, the operation can be the vehicle speed, i.e., when the vehicle runs at a higher vehicle speed than a specified vehicle speed. See columns 1 and 2. Furthermore, according to Strifler, the system determines whether an upshift is possible (i.e., selecting a higher

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gear) and determines that the operation that worsens fuel economy has been performed when the vehicle runs without an upshift under conditions in which upshift is possible. See columns 1 and 2. See also columns 3 and 4. According further to Strifler, the monitoring system comprises a display device or displaying the calculated excess (difference) fuel consumption. See column 9.

In light of the foregoing, claims 1-8 and 16-21 are rejected and claims 9-15 are allowed.

This office action is made non-final.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

4,845,630	Stephens	Jul. 1989
5,006,994	Anderson et al	Apr. 1991
5,578,748	Brehob et al	Nov. 1996
6,026,784	Weisman et al	Feb. 2000

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jacques H Louis-Jacques whose telephone number is 703-305-9757. The examiner can normally be reached on M-Th 6:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Black can be reached on 703-305-8233. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jacques H Louis-Jacques
Primary Examiner
Art Unit 3661

/jlj

Jacques H. Louis-Jacques
JACQUES H. LOUIS-JACQUES
PRIMARY EXAMINER